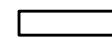
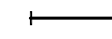






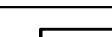

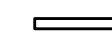



LIGHTING FIXTURE SCHEDULE (BACK OF HOUSE)									
TYPE	SYMBOL	DESCRIPTION	MANUFACTUR. & CATALOG NO.	LAMPS		FIXTURE TOTAL VA	VOLTAGE	MOUNTINGS: P-PENDANT R-RECESSED S-SURFACE	REMARKS
				QTY	TYPE				
A		FLUORESCENT WRAPAROUND WITH HIGH IMPACT ACRYLIC LENS	COLUMBIA WC4-232-EU-DR OR APPROVED EQUAL BY LIGHTOLIER OR LITHONIA	2	32W T8	60	277	P/S	
B		4', ENCLOSED, SURFACE OR PENDANT MOUNTED INDUSTRIAL T8 FLUORESCENT FIXTURE	LITHONIA CLM-232-277-GEB10IS OR APPROVED EQUAL BY COLUMBIA OR LIGHTOLIER	2	32W T8 PROVIDE GE SPX LAMP OR APPROVED EQUAL FOR FIXTURES IN CBIS RM 133	60	277	P/S	PROVIDE SWIVEL-STEM HANGER "SQ" OPTION FOR AREAS W/O FINISHED CLG
B2		SIMILAR TO FIXTURE "B" EXCEPT 120V	LITHONIA CLM-232-120-GEB10IS OR APPROVED EQUAL BY COLUMBIA OR LIGHTOLIER	2	32W T8	60	120	P/S	PROVIDE SWIVEL-STEM HANGER "SQ" OPTION FOR AREAS W/O FINISHED CLG
C		WALL OR CEILING MOUNTED GUARDED GLASS COVERED VAPOR-PROOF INCANDESCENT	HALUX ELBA20GSV OR ELJA20GSV. GE-H7 SERIES HUBBELL-V SERIES	1	100W-A21	100	120	S	ELEVATOR PITS
D		FULL CUTOFF METAL HALIDE WALL PACK. WET LOCATION LISTED	HUBBELL LCC-50P8-* OR APPROVED EQUAL BY COLUMBIA OR LITHONIA *-FINISH BY ARCHITECT	1	50W MH	70	277	S	EXTERIOR (BACK OF HOUSE)
D-EM		SAME AS TYPE "D" WITH EGRESS LAMP SOCKET. PROVIDE 50W HALOGEN EGRESS LAMP.	HUBBELL LCC-50P8-* OR APPROVED EQUAL BY COLUMBIA OR LITHONIA *-FINISH BY ARCHITECT	1	50W MH	70	277	S	EXTERIOR (BACK OF HOUSE)
				1 EM LAMP	50W MH	70			
F		4' SURFACE MOUNTED FLUORESCENT WALL BRACKET WITH T8 LAMPS.	COLUMBIA W4-232-E120 OR APPROVED EQUAL BY LIGHTOLIER OR LITHONIA	2	32W T8	60	277	S	STAIRWELL
G		2' SURFACE MOUNTED FLUORESCENT WALL BRACKET WITH T8 LAMPS.	COLUMBIA W2-217-EU OR APPROVED EQUAL BY LIGHTOLIER OR LITHONIA	2	17W T8	30	120V FOR FIXTURE IN CLOSET WITHIN BAR 226 AND 277V ELSEWHERE	S	
H		2'X4' SURFACE MOUNT FLUORESCENT HIGH ABUSE FIXTURE. 18-GAUGE CRS HOUSING AND LENS FRAME.	KENALL HASE124-3-32-IS-2-277-2F-2H-6 OR APPROVED EQUAL BY L.C. DOANE OR LIGHTOLIER	3	32W T8	90	277	S	
J		2'X4' SURFACE MOUNT FLUORESCENT FIXTURE.	COLUMBIA SM24-332-FSA12-EU OR APPROVED EQUAL BY LIGHTOLIER OR LITHONIA	3	32W T8	90	277	S	
K		UNDERCABINET FLUORESCENT FIXTURE	LITHONIA N2S-32-277-GEB10IS OR APPROVED EQUAL BY LIGHTOLIER OR LITHONIA	1	32W T8	30	277	S	
L		2'X4' SURFACE MOUNT FLUORESCENT FIXTURE.	COLUMBIA SM24-232-FSA12-EU OR APPROVED EQUAL BY LIGHTOLIER OR LITHONIA	2	32W T8	60	277	S	
M		2'X4' GRID MOUNT, AIR HANDLING, 18-CELL PARABOLIC FLUORESCENT FIXTURE.	LITHONIA 2ESBP-A-232-277-BILP OR APPROVED EQUAL BY COLUMBIA OR LIGHTOLIER	2	32W T8	48	277	G	
M2		SAME AS FIXTURE "M" BUT 120V.	LITHONIA 2ESBP-A-232-120-BILP OR APPROVED EQUAL BY COLUMBIA OR LIGHTOLIER	2	32W T8	48	120	G	
N		5'X48" LINEAR FLUORESCENT FIXTURE WITH COLD FORMED, POLYCARBONATE LENS. CEILING (PENDANT) MOUNT.	KENALL TSH548-C-3-32-EB-1-277 AND SUP-XX-OAH OPTION FOR SUSPENSION OR APPROVED EQUAL BY L.C. DOANE OR LIGHTOLIER	3	32W T8	80	277	P	FIXTURE SHALL BE MOUNTED 11' AFF
N2		SAME AS FIXTURE "N", WITH COLD WEATHER BALLAST OPTION ADDED.	KENALL TSH548-C-3-32-EB-1-277 AND SUP-XX-OAH OPTION FOR SUSPENSION AND "CW" OPTION (COLD WEATHER BALLAST) OR APPROVED EQUAL BY L.C. DOANE OR LIGHTOLIER	3	32W T8	80	277	P	FIXTURE SHALL BE MOUNTED 11' AFF
P		2'X4' RECESSED MOUNT FLUORESCENT WITH ACRYLIC LENS	LITHONIA 2GT8-2-32-A12-277-GEB10IS OR APPROVED EQUAL BY LIGHTOLIER OR COLUMBIA	2	32W T8	58	277	S	
XA		EDGE LIT LED EXIT SIGN.	COOPER LIGHTING SURELITES EEX SERIES OR APPROVED EQUAL BY ALKCO OR DAYBRITE		LED	6 - SINGLE FACE 12 - DBL FACE	277	S	PUBLIC AREAS
XB		LED EXIT SIGN WITH STEEL HOUSING.	COOPER LIGHTING SURELITES SLX SERIES OR APPROVED EQUAL BY ALKCO OR DAYBRITE		LED	6 - SINGLE FACE 12 - DBL FACE	277	S	BACK OF HOUSE AREAS
XC		WEATHERPROOF EXIT SIGN.	COOPER LIGHTING SURELITES UX7 SERIES OR APPROVED EQUAL BY ALKCO OR DAYBRITE		LED	6 - SINGLE FACE 12 - DBL FACE	277	S	EXTERIOR AREAS

- GENERAL NOTES FOR LIGHTING FIXTURE SCHEDULES
- SEE MANUFACTURER DATA SHEETS FOR MORE INFORMATION.
  - CONTRACTOR TO PROVIDE ALL PARTS AND HARDWARE NECESSARY FOR A COMPLETE INSTALLATION.
  - ALL REMOTE LOW VOLTAGE TRANSFORMERS AND SECONDARY WIRING RUNS TO BE LOCATED AND INSTALLED BY CONTRACTOR TO LIMIT VOLTAGE DROP TO NO MORE THAN 5% MEASURED AT THE LAST LAMP.
  - CONTRACTOR TO INSTALL ALL COVE LIGHTING IN A CONTINUOUS FASHION SO AS TO MINIMIZE DARK SPOTS ON ADJACENT WALLS, FLOOR, OR CEILING.
  - REFER TO ARCHIECTURAL PLANS FOR SPECIFICATION OF ADDITIONAL LIGHTING FIXTURES INCLUDING THOSE, BUT NOT LIMITED TO, SHOWN IN PUBLIC AREAS, EXTERIOR AND APRON.
  - CONTRACTOR TO COORDINATE MOUNTING PROVISIONS FOR FIXTURES WITH CEILING TYPE.
  - TV CAMERA LIGHTS ARE TO BE RELOCATED FROM EXISTING TERMINAL TO NEW TERMINAL TO LOCATION AS SHOWN ON PLANS. PROVIDE 120-277V STEP UP TRANSFORMER IF EXISTING LIGHT FIXTURES ARE 120V.

Duluth New Terminal									
Lighting Schedule									
Type	Description	Mounting	Lamp Qty	Lamp Type	Total Fixture VA	Volts	Manufacturer	Model/Series Number	
F1	Low Profile linear fluorescent 4' architectural strip fixture with integral ballast. Provide length as required for fixtures shown in restrooms.	Suspended/Recessed/Cove	1	F28T5	Approx. 9VA/LF	277	Bartco Lighting	MIT5-1T/28-28W-277	
F1A	Low Profile linear fluorescent 4' architectural strip fixture with integral ballast	Suspended/Recessed	1	F54T5HO	60	277	Bartco Lighting	MIT5-1T/54-54W HO-277	
F1C	Low Profile linear fluorescent 4' architectural strip fixture with integral ballast and opaque lens	Surface	1	F28T5	35	277	Bartco Lighting	MIT5-1T/28-28W -277-LNO	
F1B	Low Profile linear fluorescent 2' architectural strip fixture with integral ballast.	Suspended/Recessed	1	F14T5	20	277	Bartco Lighting	MIT5-1T/14-14W -277	
F2	Suspended Cylinder, two level metal halide, Down light	Suspended	1	50W MH	60	277	Kirlin Lighting	HSR-09095-50	
F2A	Suspended Cylinder, two level metal halide, Down light	Suspended	1	70W MH	80	277	Kirlin Lighting	HSR-09095-70	
F2C	Open Appearance square can light 6"X6"	Recessed	2	42W CFL	100	277	Kirlin Lighting	FRT-04092-77	
F2D	Open Appearance square can light 6" X 6"	Recessed	1	42W CFL	50	277	Kirlin Lighting	FRS-06088-77	
F2B	Suspended Cylinder, two level metal halide, Down light	Suspended	1	175W MH	215	277	Kirlin Lighting	HRS-12107-175	
F2B-E	Same as type "F2B" but with quartz lamp included								
F2E	Open Appearance square can light 6" X 6" with dimming ballast	Recessed	1	42W CFL	50	277	Kirlin Lighting	FRS-06088-39-77	
F2F	Wall washer square can light 6" X 6"	Recessed	1	42W CFL	50	277	Kurt Versen Kirlin Lighting	H8653FM-SY FRS-06096-77	
F3	Direct/indirect lay-in 2'x4' architectural lighting fixture.	Recessed	3	F28T5	100	277	Mark Arcitectural Lighting	MDLS 24 DF 3T5 EB	
F3C	Direct/indirect lay-in 2'x4' architectural lighting fixture.	Recessed	2	F28T5	70	277	Focal Point Mark Arcitectural Lighting	FAR 24 AC 2 T5 E 277 WH MDLS 24 DF 2T5 EB	
F3B	Direct/indirect asymmetric lay-in 2'x4' architectural lighting fixture w/ perforated side basket.	Recessed	2	F28T5	60	277	Focal Point	FBX 24 W 2 T5 E 277 PS WH	
F4	Pendant, Indirect canopy lighting	Pendent	1	150W MH	190	277	Elliptipar	M154-150C	
F5	Wall mounted security metal halide fixture	Surface	1	70W MH	80	277	Lithonia Lighting	WST-70MMP277 ORS	
F6	Pole mounted metal halide fixture, pole mounted 60' AFG		1	1000W MH	1100	277	Sterner Infranor	876-1000MH-277V	
F7	Halogen TV Camera lights		1	750W HAL	750	277	Lowel	"Tota", See note 7 on this sheet	
F8	Similar to fixture "F1" except 120V	Suspended	1	F28T5	35	120	Bartco Lighting	MIT5-1T/28-28W-120	



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DULUTH INTERNATIONAL AIRPORT AUTHORITY

DULUTH INTERNATIONAL AIRPORT  
DULUTH, MN

NEW PASSENGER TERMINAL

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Landscaping Consultants:  
**APPOLD DESIGN**  
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TEL: (218) 591-5079

ENGINEER CERTIFICATION

I hereby certify that the engineering plans, specifications or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Douglas C. Mass

Signature: 

Date: 08/16/10 Reg. No.: 21067

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 1	8.11.10
	CONFORMANCE SET	7.12.10
3	PERMIT REVISIONS	7.23.10
	BUILDING PERMIT	8.16.10
	100% REVIEW	12.17.10
	BID PACKAGE 2A	1.24.11
	BP2A ADDENDUM 2	2.25.11

DATE ISSUED: 02-25-11

REVIEWED BY: XXX

DRAWN BY: JK

DESIGNED BY: JK

AEP PROJECT NUMBER

213-1882-091

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SHEET TITLE

LIGHTING FIXTURE SCHEDULE

SHEET NUMBER

E401

BID PACKAGE 2A  
ADDENDUM 2

Drawing: E:\2010.00 Duluth Airport\BID OPEN\BID-1 Electrical\Drawings\2010\_E401.dwg Plotted on: 2/25/2011 9:57 AM Plotted by: Heather, Jennifer